

## 17

13. The method of claim 1 further comprising the steps of:  
 detecting a movement of said first maxima;  
 detecting a removal and replacement of said maxima  
 within a predetermined time period;

controlling a cursor function in response to said move- 5  
 ment of said first maxima; and

providing a control function in response to said removal  
 and replacement of said second maxima.

14. The method of claim 1 further comprising the step of: 10  
 selecting an appropriate control function based on a  
 combination of a number of fingers detected, an  
 amount of time said fingers are detected, and any  
 movement of said fingers.

15. The method of claim 1 further comprising the step of  
 determining if said first and second maxima are within 5  
 centimeters, and only providing said indication of the pres-  
 ence of two fingers if said first and second maxima are  
 within 5 centimeters.

16. The method of claim 1 further comprising the step of  
 calculating first and second centroids corresponding to said  
 first and second fingers.

17. The method of claim 1 wherein said first and second  
 maxima are required to be higher than a first threshold, and 25  
 said minima is required to be less than a second threshold.

18. A touch sensor for detecting the operative coupling of  
 multiple fingers comprising:

means for scanning the touch sensor to (a) identify a first  
 maxima in a signal corresponding to a first finger, (b)  
 identify a minima following the first maxima, and (c)  
 identify a second maxima in a signal corresponding to  
 a second finger following said minima, and

means for providing an indication of the simultaneous 35  
 presence of two fingers in response to identification of  
 said first and second maxima.

19. The touch sensor of claim 18 further comprising:

means for selecting an appropriate control function based  
 on a combination of a number of fingers detected, an  
 amount of time said fingers are detected, and any  
 movement of said fingers.

20. The touch sensor of claim 18 wherein said touch  
 sensor includes a plurality of lines, said maxima being a  
 largest local variation in a signal value on one of said lines 45  
 due to capacitive coupling of a finger.

21. The touch sensor of claim 18 wherein said maxima are  
 peaks.

22. The touch sensor of claim 18 further comprising  
 means for comparing a distance from said first maxima to 50  
 said second maxima to a predefined threshold.

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23. The touch sensor of claim 18 further comprising:  
 means for providing a first control function in response to  
 the detection of the movement of two fingers;

means for detecting the reaching of an edge of said touch  
 sensor by said two fingers;

means for detecting a first time corresponding to the  
 removal of said fingers from said touch sensor;

means for detecting a second time corresponding to the  
 replacement of said two fingers on said touch sensor;  
 and

means for continuing said first control function if said first  
 and second times are within a predetermined time limit  
 of each other.

24. The touch sensor of claim 18 further comprising:

means for detecting a distance between said first and  
 second maxima.

25. The touch sensor of claim 18 further comprising:

means for providing a drag control function in response to  
 detecting a movement in substantial unison of two said  
 fingers.

26. The touch sensor of claim 18 further comprising:

means for providing a click function in response to the  
 removal and reappearance of said second maxima  
 within a predetermined period of time.

27. The touch sensor of claim 18 further comprising:

means for detecting a movement of said first maxima;  
 means for detecting a removal and replacement of said  
 maxima within a predetermined time period;

means for controlling a cursor function in response to said  
 movement of said first maxima; and

means for providing a control function in response to said  
 removal and replacement of said second maxima.

28. The touch sensor of claim 18 further comprising:

means for selecting an appropriate control function based  
 on a combination of a number of fingers detected, an  
 amount of time said fingers are detected, and any  
 movement of said fingers.

29. The sensor of claim 18 further comprising means for  
 determining if said first and second maxima are within 5  
 centimeters, and only providing said indication of the pres-  
 ence of two fingers if said first and second maxima are  
 within 5 centimeters.

30. The sensor of claim 18 further comprising means for  
 calculating first and second centroids corresponding to said  
 first and second fingers.

31. The sensor of claim 18 wherein said first and second  
 maxima are required to be higher than a first threshold, and  
 said minima is required to be less than a second threshold.

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